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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR          | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|-------------------------------|---------------------|------------------|
| 09/767,831      | 01/24/2001  | Sigurd Jan Maria Schelstraete | Q62329              | 2197             |

7590 04/02/2004  
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2100 Pennsylvania Avenue, N.W.  
Washington, DC 20037-3213

EXAMINER

WARE, CICELY Q

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2634

DATE MAILED: 04/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/767,831

Applicant(s)

MARIA SCHELSTRAETE, SIGURD JAN

Examiner

Cicely Ware

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 1-4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Specification*

1. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### *Claim Objections*

2. Claims 1-4 are objected to because of the following informalities:
  - a. Examiner suggests applicant use a uniform style throughout the claim language. Applicant uses "CHARACTERISED IN THAT". Examiner suggests applicant use "characterised in that" for clarification purposes.  
Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

3. Claims 1 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1 and 4 recite the following:
  - a. **"substantially opposite"**
  - b. **"up to a linear function of frequency"**
  - c. **"substantially equal"**

"Substantially" and "up to a" are vague and indefinite. These terms do not reference a definite boundary for the limitations in the claim.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claims 1-4 are rejected under 35 U.S.C. 102(a) as being anticipated by Boie et al. (US Patent 5,963,273).

(1) With regard to claim 1, Boie et al. discloses in (Fig. 5) a filter arrangement with a linear phase characteristic comprising: a first filter (15) having an amplitude characteristic that meets a predefined amplitude specification and having a phase characteristic that generally is a non-linear function of frequency; and a second filter cascade coupled to said first filter said second filter having a phase characteristic that is, up to a linear function of frequency (16), substantially opposite to said phase characteristic of said first filter, characterized in that said second filter is an anti-causal version of a fictive digital all-pass filter having a phase characteristic that is, up to a linear function of frequency, substantially equal to said phase characteristic of said first filter (abstract, col. 1, lines 29-30, 34-39, 43-45, 47-50, 60-62, col. 6, lines 14-19, 23-24, 36-39, col. 7, lines 42-44).

(2) With regard to claim 2, claim 2 inherits all the limitations of claim 1. Boie et al. further discloses that the first filter is an analogue filter (col. 1, lines 10-15, 22-24).

(3) With regard to claim 3, claim 3 inherits all the limitations of claim 2. Boie et al. further discloses that the first filter is a digital filter (col. 1, lines 10-15, 22-24).

(4) With regard to claim 4, Boie et al. further discloses a method to develop a filter arrangement with a linear phase characteristic comprising the steps of: designing a first filter so that its amplitude characteristic meets a predefined amplitude specification; implementing said first filter; determining a phase characteristic of said first filter, said phase characteristic being a non-linear function of frequency; implementing a second filter so that its phase characteristic is, up to a linear function of frequency, substantially opposite to said phase characteristic of said first filter; and cascade coupling said first filter and said second filter to thereby constitute said filter arrangement, characterized in that said step of implementing said second filter comprises the sub-steps of designing a fictive digital all-pass filter so that its phase characteristic is up to a linear function of frequency, substantially equal to said phase characteristic of said first filter; and implementing said second filter as an anti-causal version of said fictive digital all-pass filter (Fig. 5, col. 1, lines 34-39, 47-51, col. 6, lines 14-19, 23-24, 30-39).

### ***Conclusion***

6. The prior art made record and not relied upon is considered pertinent to applicant's disclosure:

a. Pollet et al. US Patent 6553066 discloses a time error compensation

arrangement and multi-carrier modem.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cicely Ware whose telephone number is 703-305-8326. The examiner can normally be reached on Monday – Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703-305-4714. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

*Cicely Ware*

cqw  
March 22, 2004



**STEPHEN CHIN**  
**SUPERVISORY PATENT EXAMINE**  
**TECHNOLOGY CENTER 2600**